

Final Exam Practice: NO CALCULATORS!

1. Algebraic Writing (5 points each): Answer each question in complete sentences using algebraic terms. Be sure to echo the prompt.

a. Name one similarity and one difference between an expression and an equation. Be sure that the similarity and the difference each relate to algebra.

b. Between multiplication and division, how do you decide which operation should be performed first in an expression?

c. What does algebra mean in Arabic? Explain how this definition makes sense by **relating it to at least one of the algebraic terms from this unit.**

2. Symbols to Represent Operations (4 points each): Given that $g\&h$ means $3g - h$, evaluate the following.

a. $6\&1$

b. $-3\&4$

3. Writing Algebraic Expressions and Equations (3 points each): Write an algebraic expression or equation for each. Draw a smiley face to the right for an extra point.

a. the quotient of eleven and x

b. twice a number z increased by two

c. The sum of two and z is y .

4. Evaluating Expressions (5 points each): Evaluate each expression if $x = 2$, $y = 4$ and $z = 3$.

a. xyz

b. $2y - x + z$

c. $3(y - z + x)$

5. Order of Operations (5 points each): Show all work and box your final answers.

a. $6 - 1 + 7$

b.
$$\frac{2(5) + 8 - 3}{11 - 6}$$

c. $20 - [2(6 + 3) - 10] + 1$

d. $4 + 5(3) - 6 + 11$

6. Integer Operations (2 points each)

a. $2 - 5 =$	b. $2 + (-5) =$	c. $-2 - 5 =$
d. $-2 - (-5) =$	e. $2(5) =$	f. $(-2)(-5) =$
g. $(-2)(5) =$	h. $2(-5) =$	i. $10/(-2) =$

7. Opposites and Absolute Value (2 points each)

a. What is the opposite of eight?

b. What is the absolute value of eight?

c. What is the product of the absolute value of negative one and the opposite of five?

d. What is the sum of the opposite of six and the opposite of negative three?

8. Word Problem (5 points): Please answer the question in complete sentences, using algebraic terms. Echo the prompt.

A diver is thirty-five feet below the surface of the water. He swims even further down for another fifty-two feet. What is his depth, with respect to the surface of the water?
Write your answer as an integer and explain how you arrived at your answer.
